DUAL-BAND DUAL-POLARIZED ANTENNA ARRAY

ABSTRACT

The present invention refers generally to a new family of antenna arrays that are able to operate simultaneously at two different frequency bands, while featuring dual-polarization at both bands. The design is suitable for applications where the two bands are centered at two frequencies f1 and f2 such that the ratio between the larger frequency (f2) to the smaller frequency (f1) is $f2/f1<1.5$. The dual-band dual-polarization feature is achieved mainly by means of the physical position of the antenna elements within the array. Also, some particular antenna elements are newly disclosed to enhance the antenna performance.